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November 1998

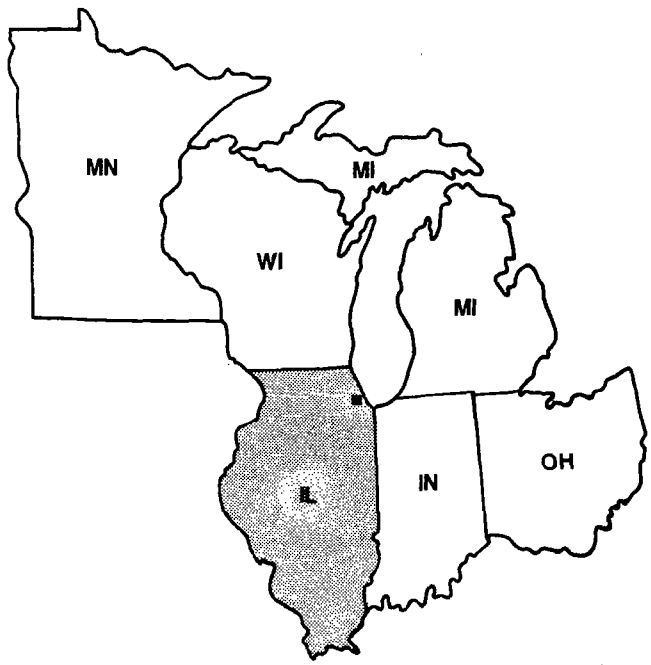
Research and Development

EPA

AERIAL PHOTOGRAPHIC ANALYSIS MIDWEST METALLICS SITE

Summit, Illinois

EPA Region 5



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AERIAL PHOTOGRAPHIC ANALYSIS
MIDWEST METALLICS SITE

Summit, Illinois

by

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Contract No. 68-C5-0065

Work Assignment Manager

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NATIONAL EXPOSURE RESEARCH LABORATORY
OFFICE OF RESEARCH AND DEVELOPMENT
U.S. ENVIRONMENTAL PROTECTION AGENCY
LAS VEGAS, NEVADA 89193-3478

NOTICE

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ABSTRACT

This report presents the results of an aerial photographic analysis of the Midwest Metallics site. The analysis covers nine years of aerial photographs and spans the period from 1976 through 1998. The site is located approximately 16 kilometers (10 miles) southwest of Chicago, Illinois and comprises approximately 9 hectares (23 acres). The primary feature of interest in this analysis, the U.S. Environmental Protection Agency (EPA) area of concern, is a storage pile of shredded automotive residue which first appeared in 1987 and was in place through the remainder of the study.

This analysis documents landscape morphology, patterns of hazardous waste disposal, and other observable activities and conditions of environmental significance at this site. In addition to the storage pile of shredded automotive residue, the findings from the analysis of aerial photographs include possible sheds, automobile salvage equipment, waste processing equipment, debris piles, scrap metal piles, impoundments, standing liquid, vertical tanks, salvaged automobile bodies, access roads, and a parking area. Findings indicate possible sources of groundwater contamination such as lead and battery acid. Lead and battery acid are typically found at scrap metal processing sites such as this one.

The U.S. Environmental Protection Agency, Environmental Sciences Division, Landscape Ecology Branch in Las Vegas, Nevada, prepared this report for the EPA Region 5 Waste, Pesticides, and Toxics Division in Chicago, Illinois, and the EPA Office of Solid Waste and Emergency Response in Washington, D.C.

CONTENTS

FIGURES

INTRODUCTION

An analysis of aerial photographs was performed for the Midwest Metallics site, located approximately 16 kilometers (10 miles) southwest of Chicago, Illinois (Figures 1 and 2). This site is approximately 9 hectares (23 acres). This analysis provides remote sensing support to field investigators in the U.S. Environmental Protection Agency (EPA) Region 5 under the Resource Conservation and Recovery Act (RCRA).

Nine years of aerial photographs of the Midwest Metallics site were obtained to represent the period from 1976 through 1998. The Midwest Metallics site in Summit, Illinois, is a scrap metal processor with three other facilities also located in the metropolitan Chicago area (OSHA 1998).

Photographs of the Midwest Metallics site were analyzed to investigate possible sources of groundwater contamination such as lead and battery acid. Lead and battery acid are typically found at scrap metal processing sites such as this one. The primary feature of interest in this analysis, the EPA area of concern, is a pile of shredded automotive residue (denoted storage pile SP1 in this study) as identified by EPA Region 5. Features included in the scrap metal process are stacked automobiles and buses, automobile salvage equipment (crushers, shredders, and conveyors), waste processing equipment (recycling mechanisms), scrap metal piles (piles with coarse, uneven, shiny surfaces), debris piles, and storage piles of shredded automotive residue.

This analysis documents landscape morphology, patterns of hazardous waste disposal, and other observable activities and conditions of environmental significance at this site. Findings, in addition to the ones above, include possible sheds, impoundments, standing liquid, liquid-filled impoundments, vertical tanks, access roads, and a parking area.

Collateral data were provided by EPA Region 5 and the United States Department of Labor, Occupational Safety and Health Administration (OSHA). Site boundaries used in this analysis were determined from observations made from the aerial photographs and do not necessarily denote legal property lines or ownership.

A glossary, defining features or conditions identified in this report, follows the analysis section. Sources for all maps, aerial photographs, and collateral data used in the production of this report are listed in the References section. A list of all aerial photographs that were identified and evaluated for potential application to this study can be obtained by contacting the EPA Work Assignment Manager. Historical aerial photographs used in the analysis of this site have been digitally scanned and printed for use in this report. A transparent overlay with interpretative data is affixed to each of the digital prints. See the Methodology section for a discussion of the scanning and printing procedures.

The U.S. Environmental Protection Agency, Environmental Sciences Division, Landscape Ecology Branch in Las Vegas, Nevada, prepared this report for the EPA Region 5 Waste, Pesticides, and Toxics Division in Chicago, Illinois, and the EPA Office of Solid waste and Emergency Response in Washington, D.C.

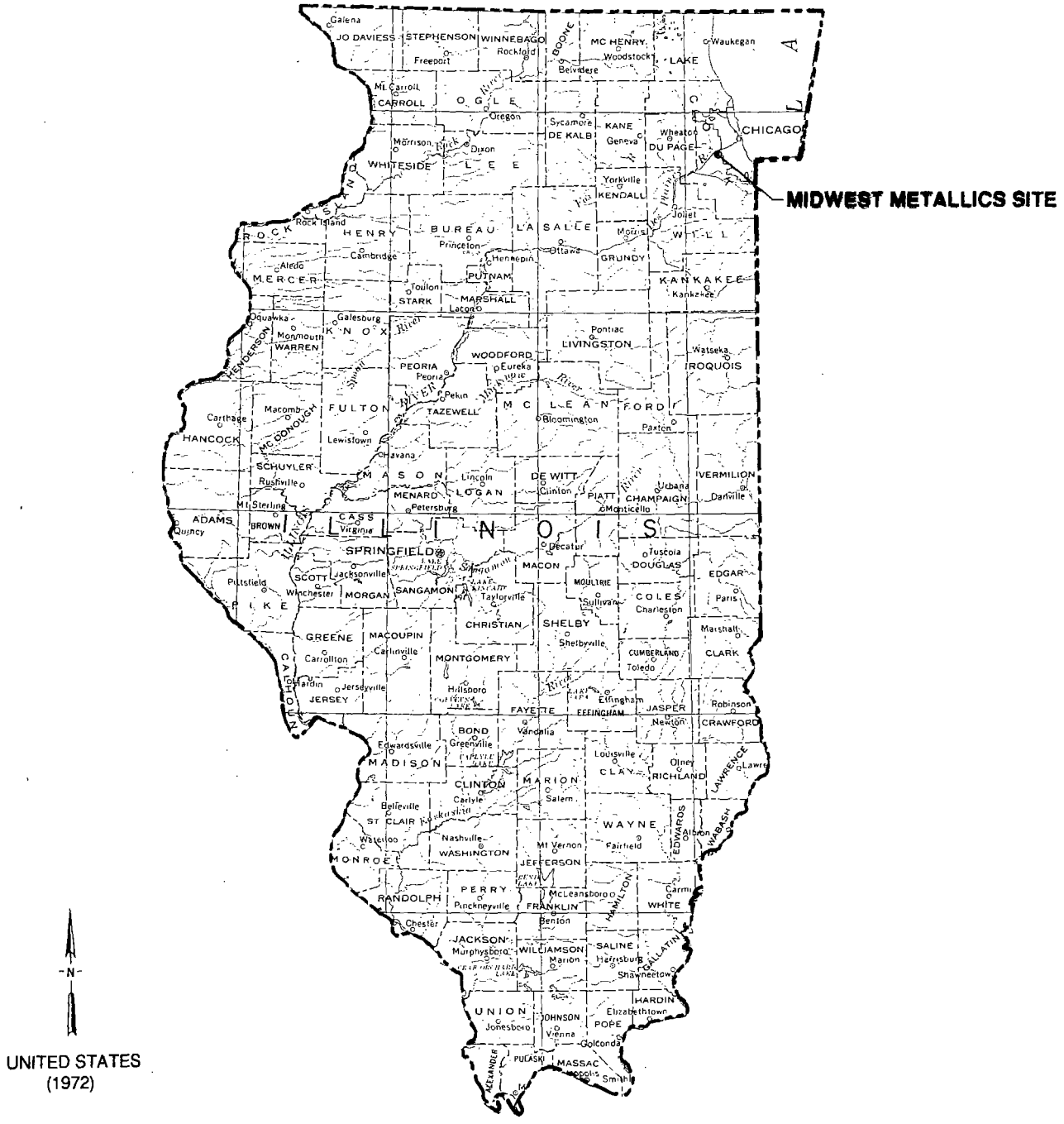
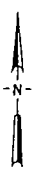


Figure 1. Study area location map, Illinois (USGS 1972). Approximate scale 1:2,800,000.

41°47'30"N
087°47'30"W

MIDWEST METALLICS SITE
41°46'38"N,087°48'20"W



BERWYN, IL
(1993)

Figure 2. Local study area location map, Berwyn, Illinois (USGS 1993). Scale 1:24,000.

METHODOLOGY

This report was prepared using a standard methodology that includes the following steps:

- data identification and acquisition,
- photographic analysis and interpretation, and
- graphics and text preparation.

These steps are described below. Subsections also address details related to specific kinds of analyses that may be required to identify environmental features such as surface drainage and wetlands. All operational steps and processes used to perform this work (including data identification and acquisition, photographic analysis and interpretation, and graphics and text preparation) adhere to strict QA/QC guidelines and standard operating procedures (SOPs). These guidelines and procedures are documented in the Master Quality Assurance Project Plan (QAPP) prepared for Remote Sensing Technical Support Contract No. 68-C5-0065 (LESAT 1998).

Data identification and acquisition included a search of government and commercial sources of historical aerial film for the study area. Photographs with optimal spatial and temporal resolution and image quality were identified for acquisition. In addition, U.S. Geological Survey (USGS) topographic maps were obtained to show the study area location and to provide geographic and topographic context.

To conduct this analysis, the analyst examined diapositives (transparencies) of historical aerial photographs showing the study area. Diapositives are most often used for analysis instead of prints because the diapositives have superior photographic resolution. They show minute details of significant environmental features that may not be discernible on a paper print.

A photographic analyst uses a stereoscope to view adjacent, overlapping pairs of diapositives on a backlit light table. In most cases, the stereoscope

is capable of various magnifications up to 60 power. Stereoscopic viewing involves using the principle of parallax (observing a feature from slightly different positions) to observe a three-dimensional representation of the area of interest. The stereoscope enhances the photo interpretation process by allowing the analyst to observe vertical as well as horizontal spatial relationships of natural and cultural features.

The process of photographic analysis involves the visual examination and comparison of many components of the photographic image. These components include shadow, tone, color, texture, shape, size, pattern, and landscape context of individual elements of a photograph. The photo analyst identifies objects, features, and "signatures" associated with specific environmental conditions or events. The term "signature" refers to a combination of components or characteristics that indicate a specific object, condition, or pattern of environmental significance. The academic and professional training, photo interpretation experience gained through repetitive observations of similar features or activities, and deductive logic of the analyst as well as background information from collateral sources (e.g., site maps, geologic reports, soil surveys) are critical factors employed in the photographic analysis.

The analyst records the results of the analysis by using a standard set of annotations and terminology to identify objects and features observed on the diapositives. Significant findings are annotated on overlays attached to the photographic or computer-reproduced prints in the report and discussed in the accompanying text. Annotations that are self-explanatory may not be discussed in the text. The annotations are defined in the legend that accompanies each print and in the text when first used.

Objects and features are identified in the graphics and text according to the analyst's degree of confidence in the evidence. A distinction is made between certain, probable, and possible identifications. When the analyst believes the identification is unmistakable (certain), no qualifier is used. Probable is used when a limited number of discernible characteristics allow the analyst to be reasonably sure of a particular identification. Possible is used when only a few characteristics are discernible, and the analyst can only infer an identification.

The prints in this report have been reproduced, either by photographic or computer methods, from the original film. Reproductions are made from the original film and may be either contact (the same size) prints or enlargements, depending on the scale of the original film. Any computer-produced prints used in this report are generated from scans of the film at approximately 1,300 dots per inch (dpi) and printed at 720 dpi. Although the reproductions allow effective display of the interpretive annotations, they may have less photographic resolution than the original film. Therefore, some of the objects and features identified in the original image and described in the text may not be as clearly discernible on the prints in this report.

Study area boundaries shown in this report were determined from aerial photographs or collateral data and do not denote legal property lines or ownership.

Surface Drainage

The surface drainage analysis produced for this report identifies the direction and potential path that a liquid spill or surface runoff would follow based on the topography of the terrain and the presence of discernible obstacles to surface flow. The analyst determines the direction of surface drainage by stereoscopic analysis of the aerial photographs and by examining USGS topographic maps. Site-specific surface drainage patterns are annotated on the map or photo overlay. Where the direction of subtle drainage cannot be determined, an indeterminate drainage line symbol is used. Regional surface flow is ascertained from the USGS topographic maps.

PHOTOGRAPHIC ANALYSIS

The Midwest Metallics site is located in northeastern Illinois, in the municipality of Summit, approximately 16 kilometers (10 miles) southwest of Chicago. There is a fence line, which encloses and forms the boundary of the site. Railroad lines run outside the eastern and western boundaries of the site. Through the center of the site is another railroad line which heads northeast to southwest and is only observed in 1976 and 1980.

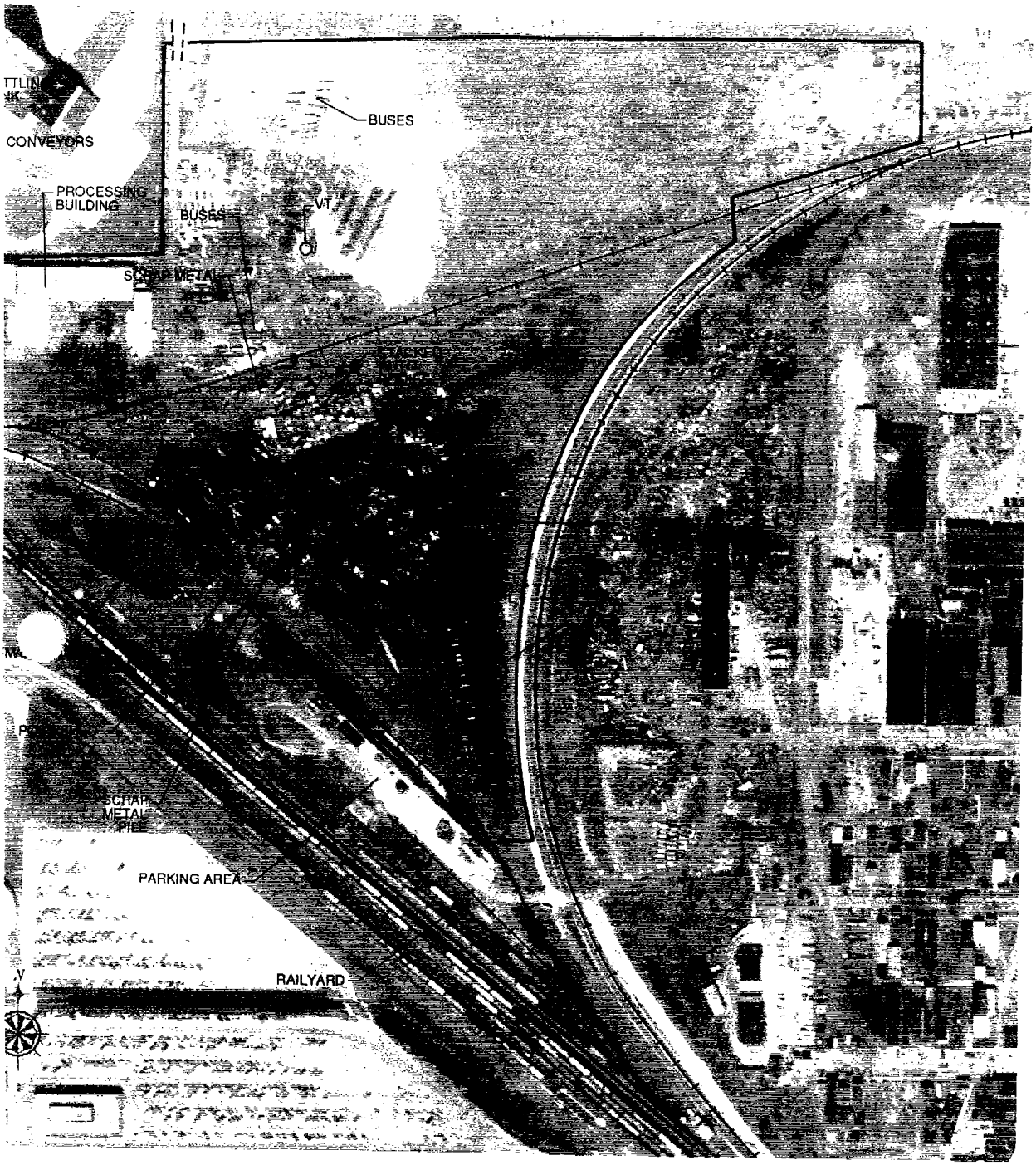
Most of the site contains little relief or drainage. Drainage patterns were observed however, from 1987 to the present in the northeastern corner of the site. There were two drainage paths before 1997, and three afterwards, all of which trend toward an impoundment along the northern edge of the site. A residential neighborhood is located east of the site, and the Des Plaines River and the Chicago Sanitary and Ship Canal are both located west of the site as discerned from the USGS location map.

The site is a scrap metal processor and recycler. Vehicles come on site and are compressed into stacks. The stacks are then shredded into piles of scrap metal. The scrap metal is then shredded again into storage piles of automotive residue. Therefore on any given year of analysis, assorted collections of vehicles, storage piles, debris piles, and scrap metal are noted on the site. These change location as part of the day to day operation of the facility. These features will be annotated but not discussed unless environmentally significant activity is associated with the feature.

An area of concern to the EPA Region 5 is a storage pile of shredded automotive residue (denoted storage pile SP1 in this report) along the eastern boundary of the site. This feature is annotated and discussed in each year of analysis that it is present.

APRIL 7, 1976 (FIGURE 3)

The site appears to be in operation. The features observed in the operations on site include a processing building, conveyors, and a settling tank. These features remain visible and active throughout the study period and will no longer be discussed or annotated. A liquid-filled impoundment (IM-1/SL) is located at the southwest corner of the site. A parking area with vehicles, a railyard, and an access road are all located southwest of the site boundary.



INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

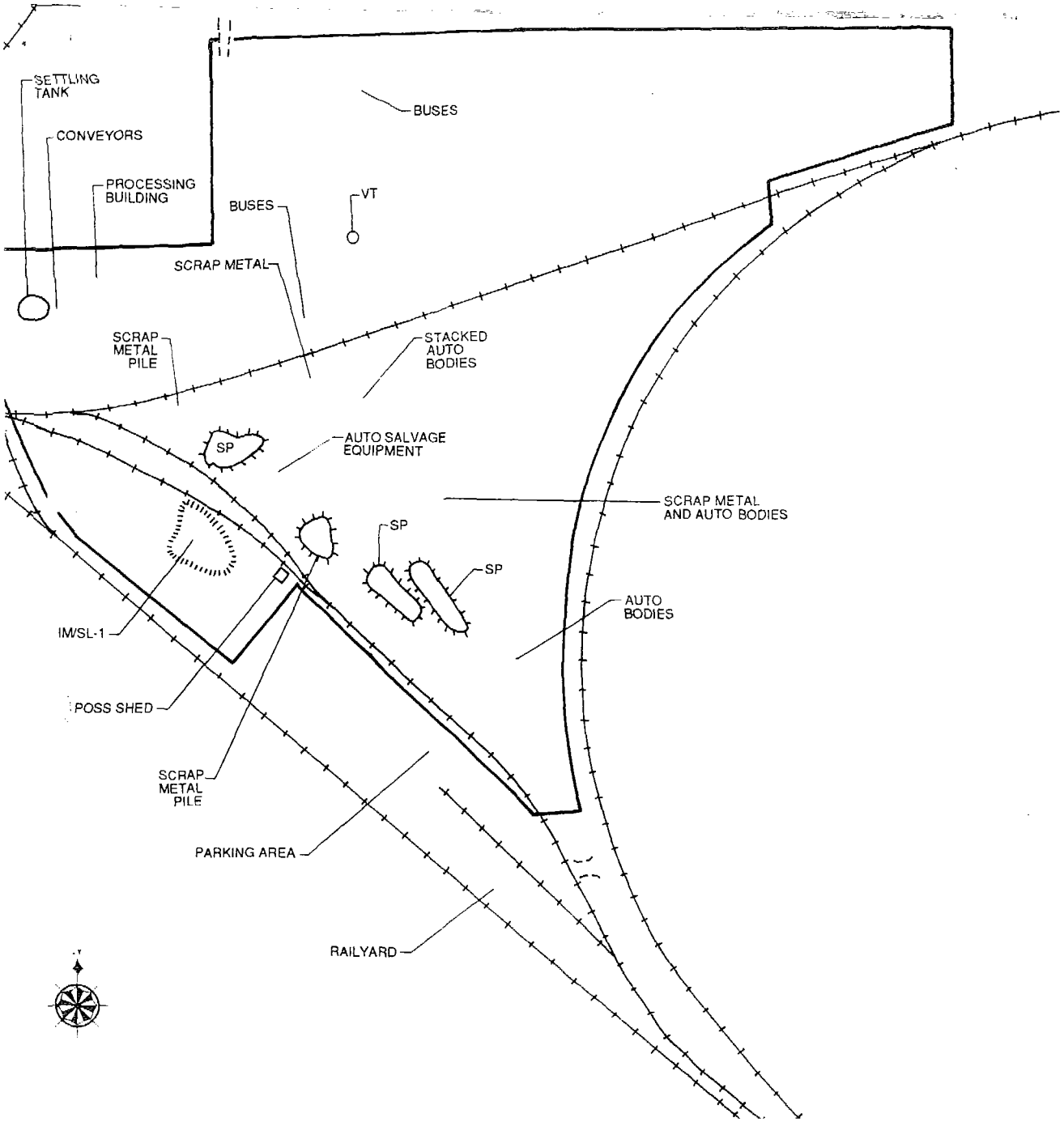
TRANSPORTATION/UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

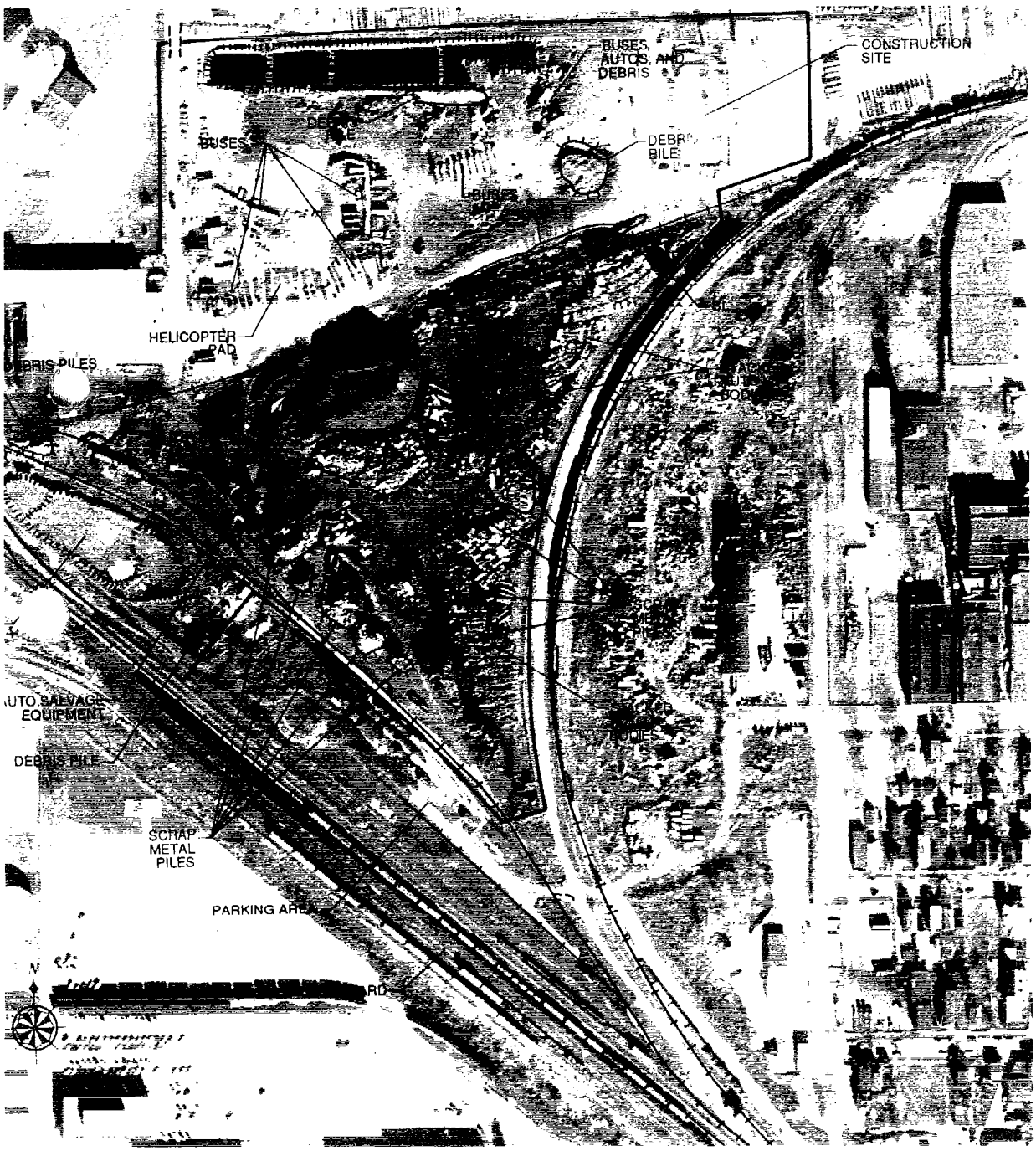
- BERM/DIKE
- STANDING LIQUID
- SL STANDING LIQUID
- EXCAVATION, PIT (EXTENSIVE)
- MOUNDED MATERIAL (EXTENSIVE)
- MM MOUNDED MATERIAL (SMALL)
- CR CRATES/BOXES
- DR DRUMS
- HT HORIZONTAL TANK
- PT PRESSURE TANK
- VT VERTICAL TANK
- CA CLEARED AREA
- DG DISTURBED GROUND
- FL FILL
- IM IMPOUNDMENT
- LG LAGOON
- OF OUTFALL
- SD SLUDGE
- ST STAIN
- SW SOLID WASTE
- TR TRENCH
- VS VEGETATION STRESS
- WD WASTE DISPOSAL AREA
- WV WETLAND VEGETATION

Midwest Metallics site, April 7, 1976. Approximate scale 1:3,000.


SETTLING TANK
CONVEYORS
PROCESSING BUILDING
BUSES
VT
BUSES
SCRAP METAL
SCRAP METAL PILE
STACKED AUTO BODIES
SP
AUTO SALVAGE EQUIPMENT
SCRAP METAL AND AUTO BODIES
SP
SP
AUTO BODIES
IM/SL-1
POSS SHED
SCRAP METAL PILE
PARKING AREA
RAILYARD

NOVEMBER 22, 1980 (FIGURE 4)

The site continues to be in operation. A liquid-filled impoundment (IM-2/SL) is present along the northern boundary of the site. A construction site is present at the northeast corner of the site. The liquid-filled impoundment IM-1/SL has increased in size since 1976 and now contains three cells. Another dry impoundment (IM-3) is present north of the automobile salvage equipment. Several areas of standing liquid (SL) have formed in the locations of depressions on the site. These areas of standing liquid will be annotated but not discussed.



INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- XXXXXX FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

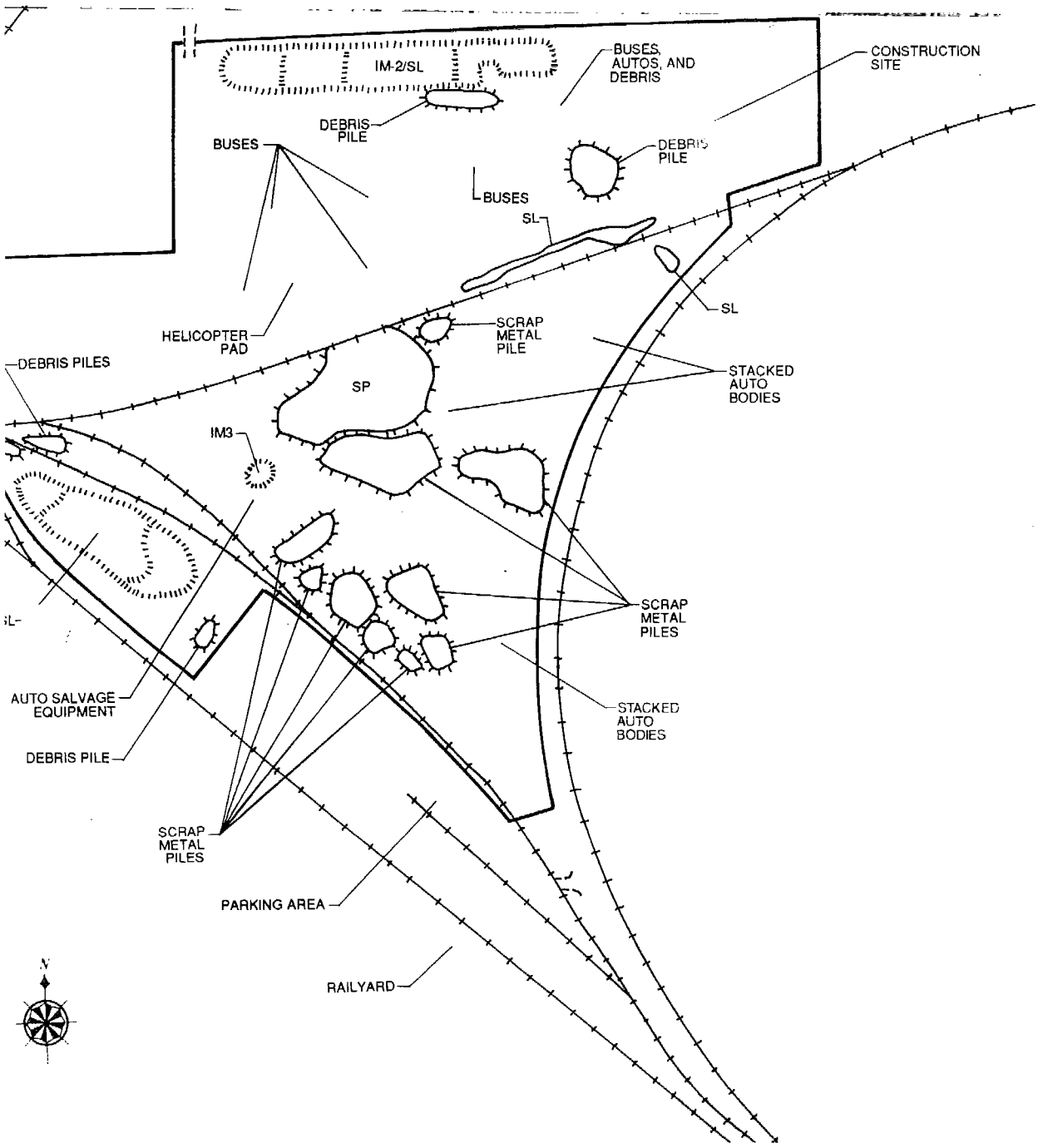
TRANSPORTATION/UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

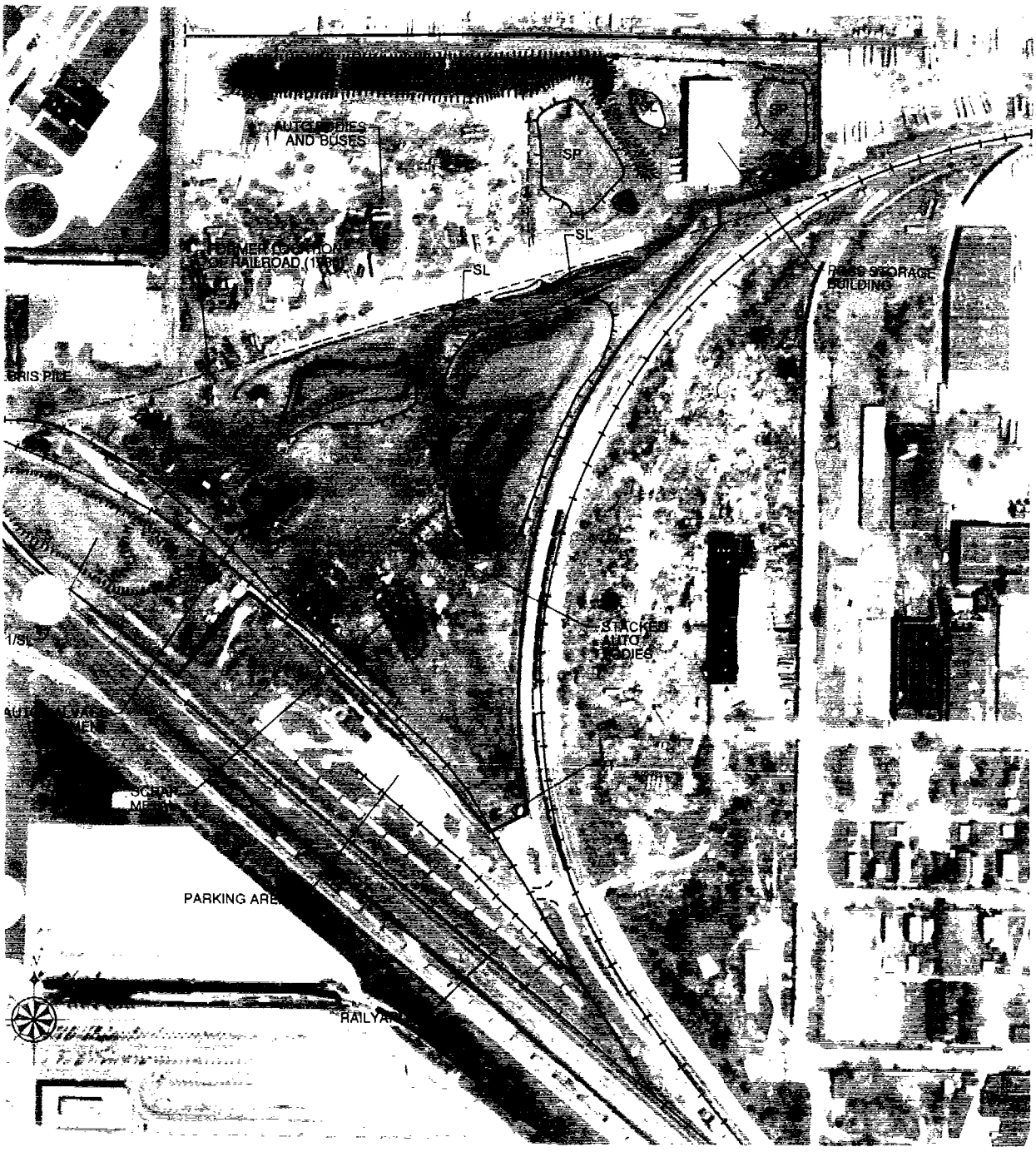
- BERM/DIKE
- STANDING LIQUID
- SL STANDING LIQUID
- EXCAVATION, PIT (EXTENSIVE)
- MOUNDED MATERIAL (EXTENSIVE)
- MM MOUNDED MATERIAL (SMALL)
- CP CRATES/BOXES
- DR DRUMS
- HT HORIZONTAL TANK
- PT PRESSURE TANK
- VT VERTICAL TANK
- C CLEARED AREA
- DG DISTURBED GROUND
- FL FILL
- IM IMPOUNDMENT
- LG LAGOON
- OF OUTFALL
- SD SUMP
- ST STAIN
- SW SOLID WASTE
- TR TRENCH
- VS VEGETATION STRESS
- WD WASTE DISPOSAL AREA
- WL WETLAND VEGETATION

Midwest Metallics site, November 22, 1980. Approximate scale 1:3,100.


IM-2/SL
BUSES, AUTOS, AND DEBRIS
CONSTRUCTION SITE
DEBRIS PILE
BUSES
DEBRIS PILE
BUSES
SL
SL
HELICOPTER PAD
SCRAP METAL PILE
DEBRIS PILES
SP
STACKED AUTO BODIES
IM3
SCRAP METAL PILES
STACKED AUTO BODIES
AUTO SALVAGE EQUIPMENT
DEBRIS PILE
SCRAP METAL PILES
PARKING AREA
RAILYARD
N

APRIL 26, 1987 (FIGURE 5)

The site continues to be in operation. The liquid-filled impoundment IM-2/SL has increased in size since 1980. Drainage patterns are now present; one channel trending north and the other trending west, both into a liquid-filled impoundment (IM-2/SL). A possible storage building has been completed in the northeast corner of the site where construction was observed in 1980. The liquid-filled impoundment IM-1/SL now contains only two cells and no changes are observed in impoundment IM-3. Storage pile SP1 (a pile with a medium tone and grainy surface), the primary feature of interest in this analysis, is noted for the first time along the eastern boundary of the site.



INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

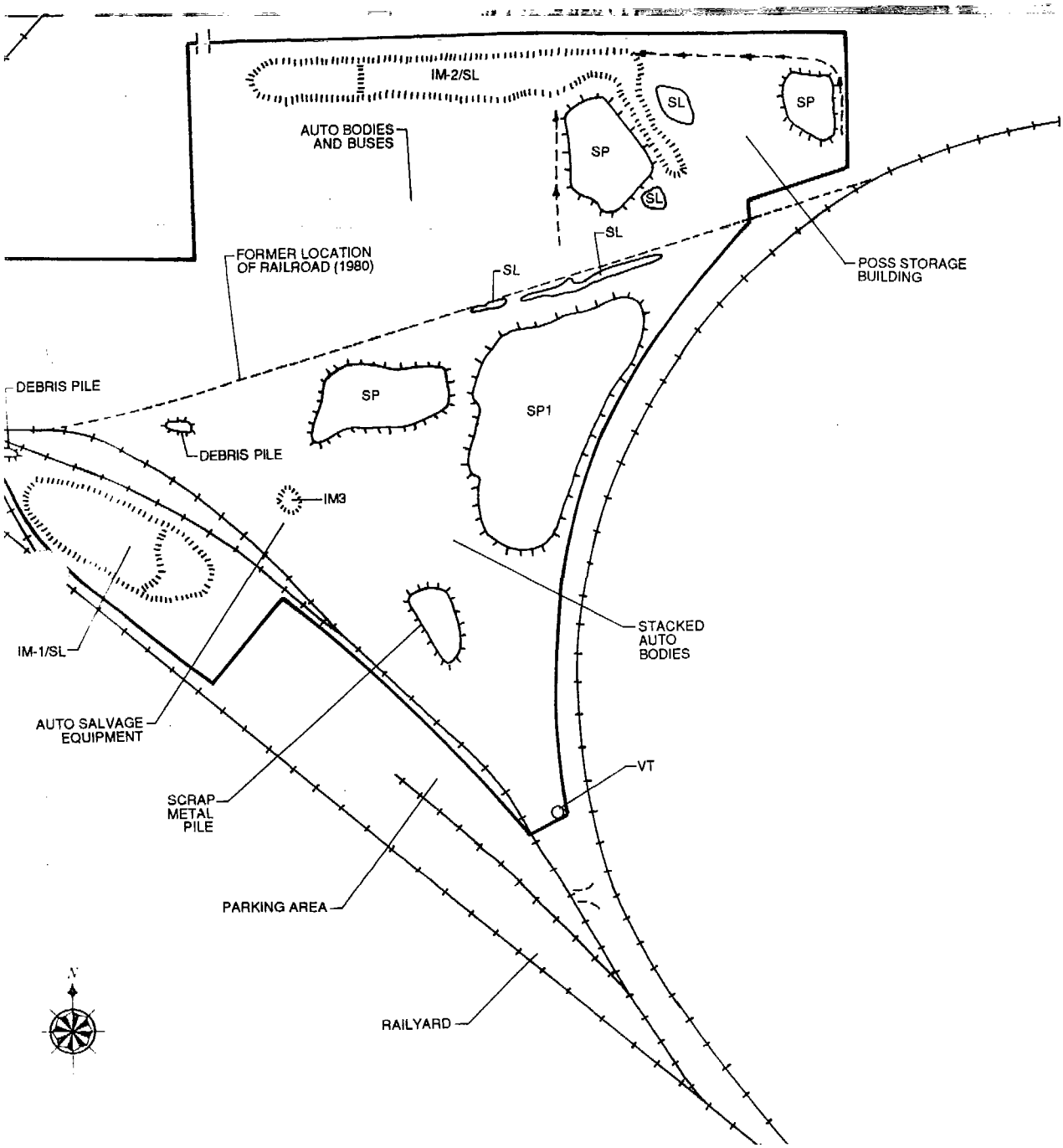
TRANSPORTATION UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

- BERM/DIKE
- STANDING LIQUID
- SL STANDING LIQUID
- EXCAVATION, PIT (EXTENSIVE)
- MOUNDED MATERIAL (EXTENSIVE)
- MOUNDED MATERIAL (SMALL)
- CR CRATES/BOXES
- DR DRUMS
- HT HORIZONTAL TANK
- PT PRESSURE TANK
- VT VERTICAL TANK
- CA CLEARED AREA
- DS DISTURBED SOIL/FILL
- FL FILL
- IM IMPOUNDMENT
- LG LAGOON
- OF OUTFALL
- PD SEEPAGE
- ST STAIN
- SW SOLID WASTE
- TR TRENCH
- VS VEGETATION STRESS
- WD WASTE DISPOSAL AREA
- WV WETLAND VEGETATION

Midwest Metallics site, April 28, 1987. Approximate scale 1:3,100.


IM-2/SL
AUTO BODIES AND BUSES
SL
SP
SP
SL
SL
FORMER LOCATION OF RAILROAD (1980)
SL
POSS STORAGE BUILDING
DEBRIS PILE
SP
SP1
DEBRIS PILE
IM3
STACKED AUTO BODIES
IM-1/SL
AUTO SALVAGE EQUIPMENT
VT
SCRAP METAL PILE
PARKING AREA
N
RAILYARD

APRIL 7, 1988 (FIGURE 6)

The site continues to be in operation. Liquid-filled impoundment IM-1/SL again contains three cells. No changes are noted in liquid-filled impoundment IM-1/SL or impoundment IM-3. New material has been added to storage pile SP1 and has approximately doubled in size since 1987.

INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

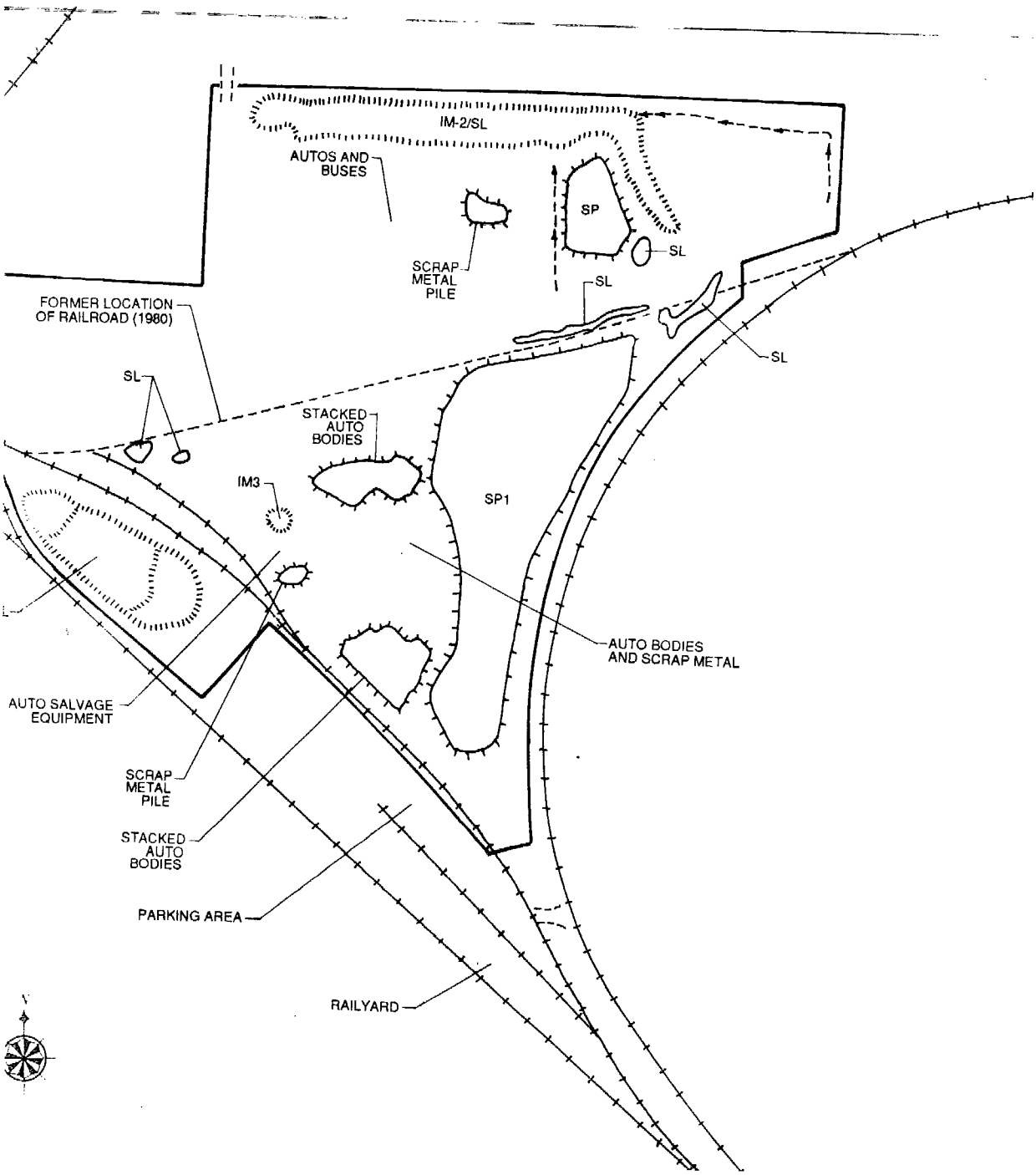
TRANSPORTATION/UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

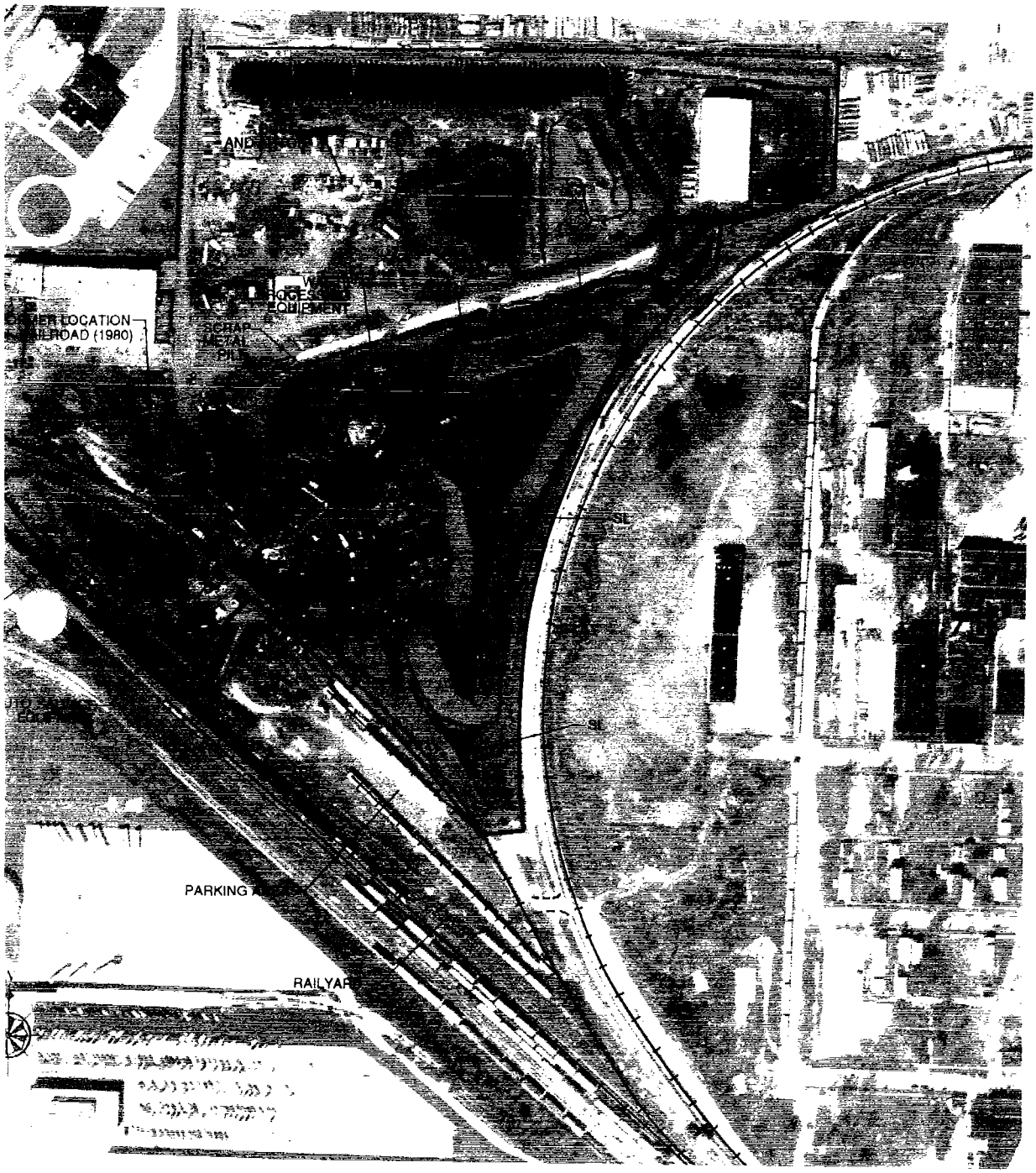
- BERM/DIKE
- STANDING LIQUID
- SL STANDING LIQUID
- EXCAVATION, PIT (EXTENSIVE)
- MOUNDED MATERIAL (EXTENSIVE)
- MM MOUNDED MATERIAL (SMALL)
- CR CRATES/BOXES
- DR DRUMS
- HT HORIZONTAL TANK
- PT PRESSURE TANK
- VT VERTICAL TANK
- CA CLEARED AREA
- DG DISTURBED GROUND
- FL FILL
- IM IMPOUNDMENT
- LA LAGOON
- OF OUTFALL
- SD SLUDGE
- ST STAIN
- SW SOLID WASTE
- TR TRENCH
- VS VEGETATION STRESS
- WD WASTE DISPOSAL AREA
- WV WETLAND VEGETATION

Midwest Metallics site, April 7, 1988. Approximate scale 1:3,400.


IM-2/SL
AUTOS AND BUSES
SP
SL
SCRAP METAL PILE
SL
FORMER LOCATION OF RAILROAD (1980)
SL
SL
STACKED AUTO BODIES
IM3
SP1
AUTO BODIES AND SCRAP METAL
AUTO SALVAGE EQUIPMENT
SCRAP METAL PILE
STACKED AUTO BODIES
PARKING AREA
RAILYARD

MARCH 20, 1990 (FIGURE 7)

The site continues to be in operation. No changes are noted in liquid-filled impoundments IM-1/SL and IM-2/SL or impoundment IM-3. Storage pile (SP1) has changed in shape since 1988. New waste processing equipment is visible south of the former location of the railroad.



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BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
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- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

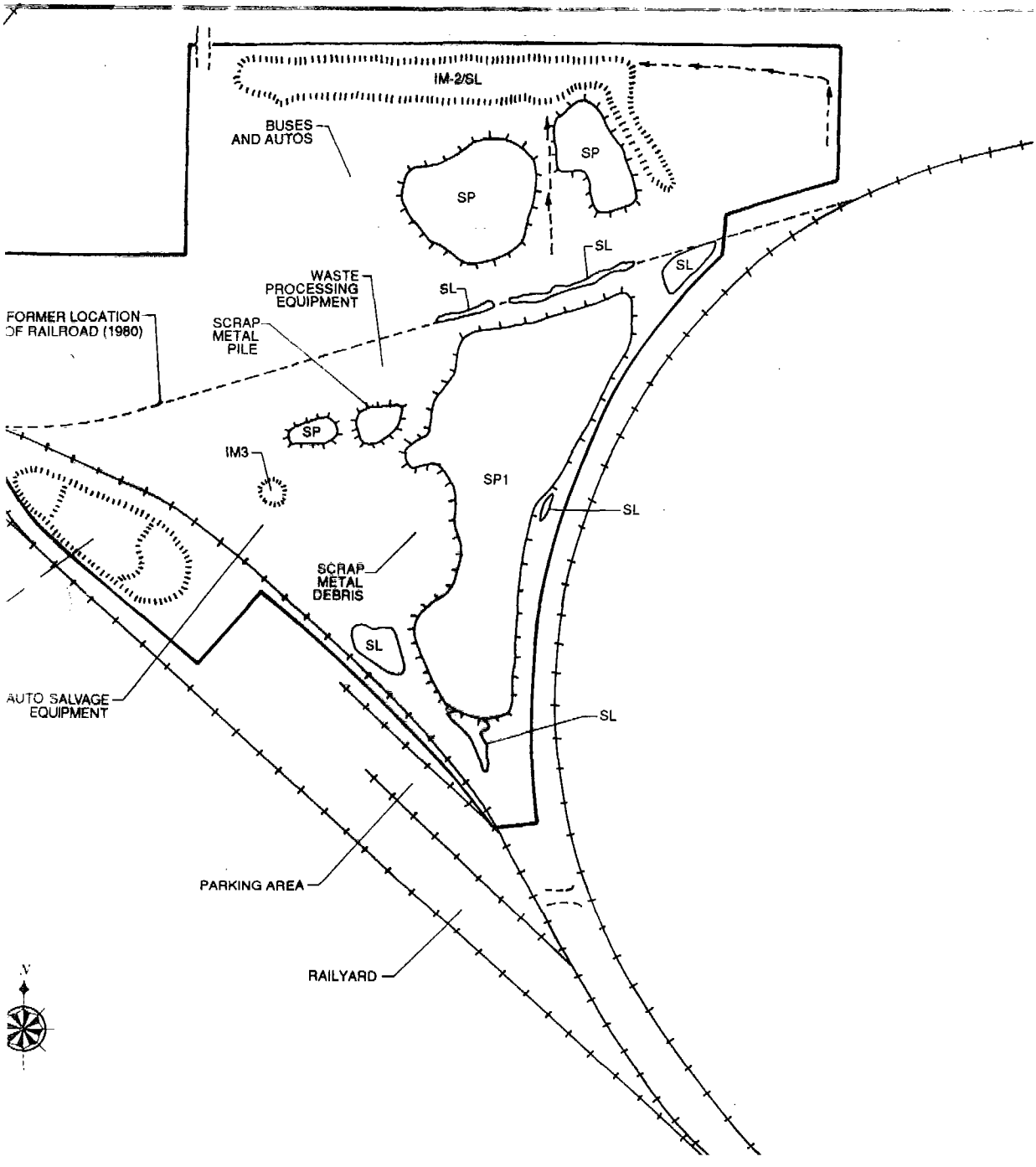
TRANSPORTATION/UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

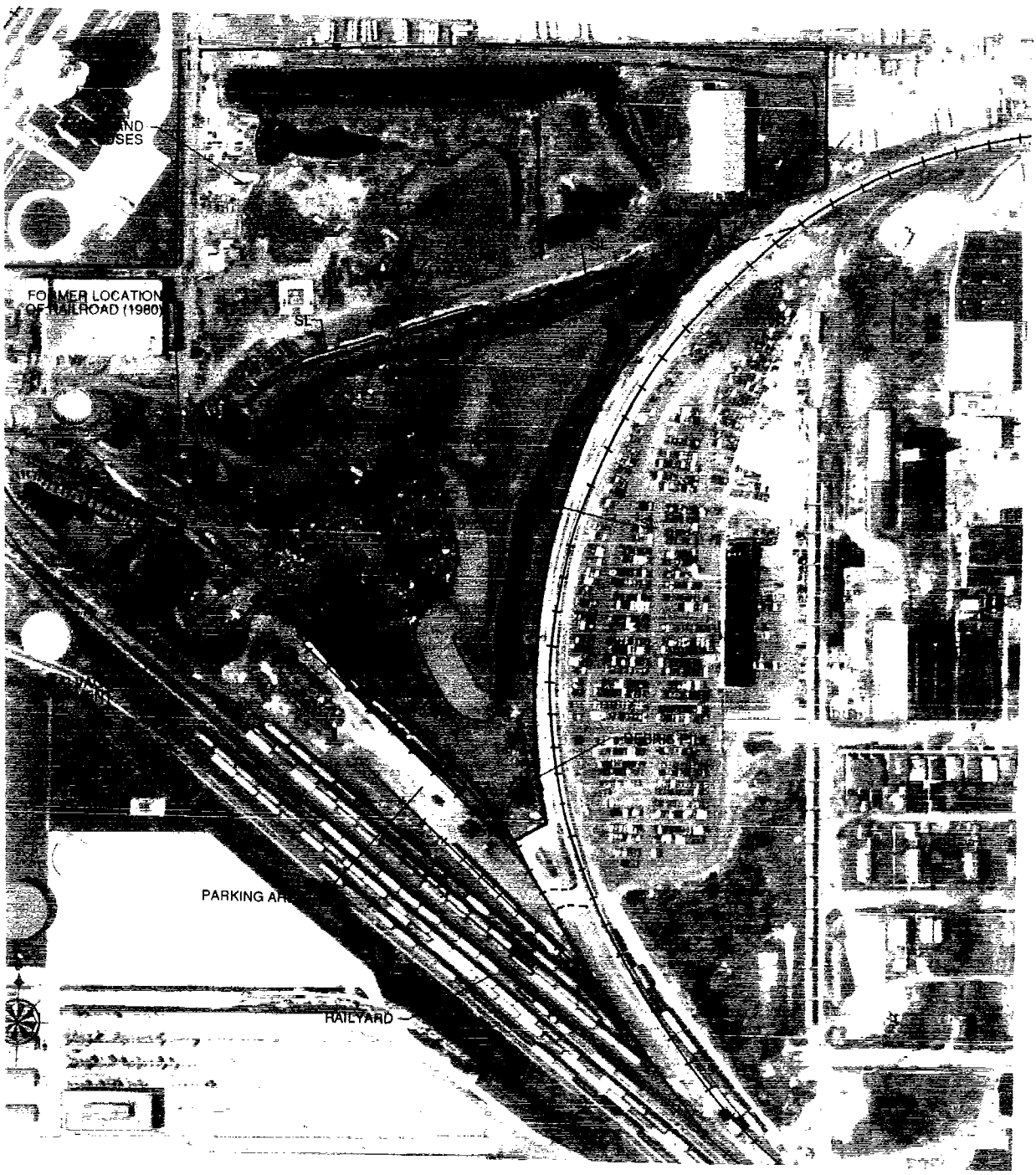
- BERM/DIKE
- STANDING LIQUID
- SL STANDING LIQUID
- EXCAVATION, PIT (EXTENSIVE)
- MOUNDED MATERIAL (EXTENSIVE)
- MOUNDED MATERIAL (SMALL)
- CP CRATES/BOXES
- DR DRUMS
- HT HORIZONTAL TANK
- PT PRESSURE TANK
- VT VERTICAL TANK
- CA CLEARED AREA
- DG DISTURBED GROUND
- FL FILL
- IM IMPOUNDMENT
- LG LAGOON
- OF OUTFALL
- SD SLUDGE
- ST STAIN
- SW SOLID WASTE
- TR TRENCH
- VS VEGETATION STRESS
- WD WASTE DISPOSAL AREA
- WV WETLAND VEGETATION

Midwest Metallics site, March 20, 1990. Approximate scale 1:3,100.


IM-2/SL
BUSES AND AUTOS
SP
SP
SL
SL
WASTE PROCESSING EQUIPMENT
SL
FORMER LOCATION OF RAILROAD (1980)
SCRAP METAL PILE
SP
IM3
SP1
SL
SCRAP METAL DEBRIS
SL
AUTO SALVAGE EQUIPMENT
SL
PARKING AREA
RAILYARD
N

MAY 1, 1992 (FIGURE 8)

The site continues to be in operation. Liquid-filled impoundment IM-2/SL now contains two cells. The waste processing equipment noted south of the former railroad in 1990 has been removed. Liquid-filled impoundment IM-1/SL now contains two cells. No changes are noted in impoundment IM-3. Storage pile SP1 has changed in configuration since 1990.



INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

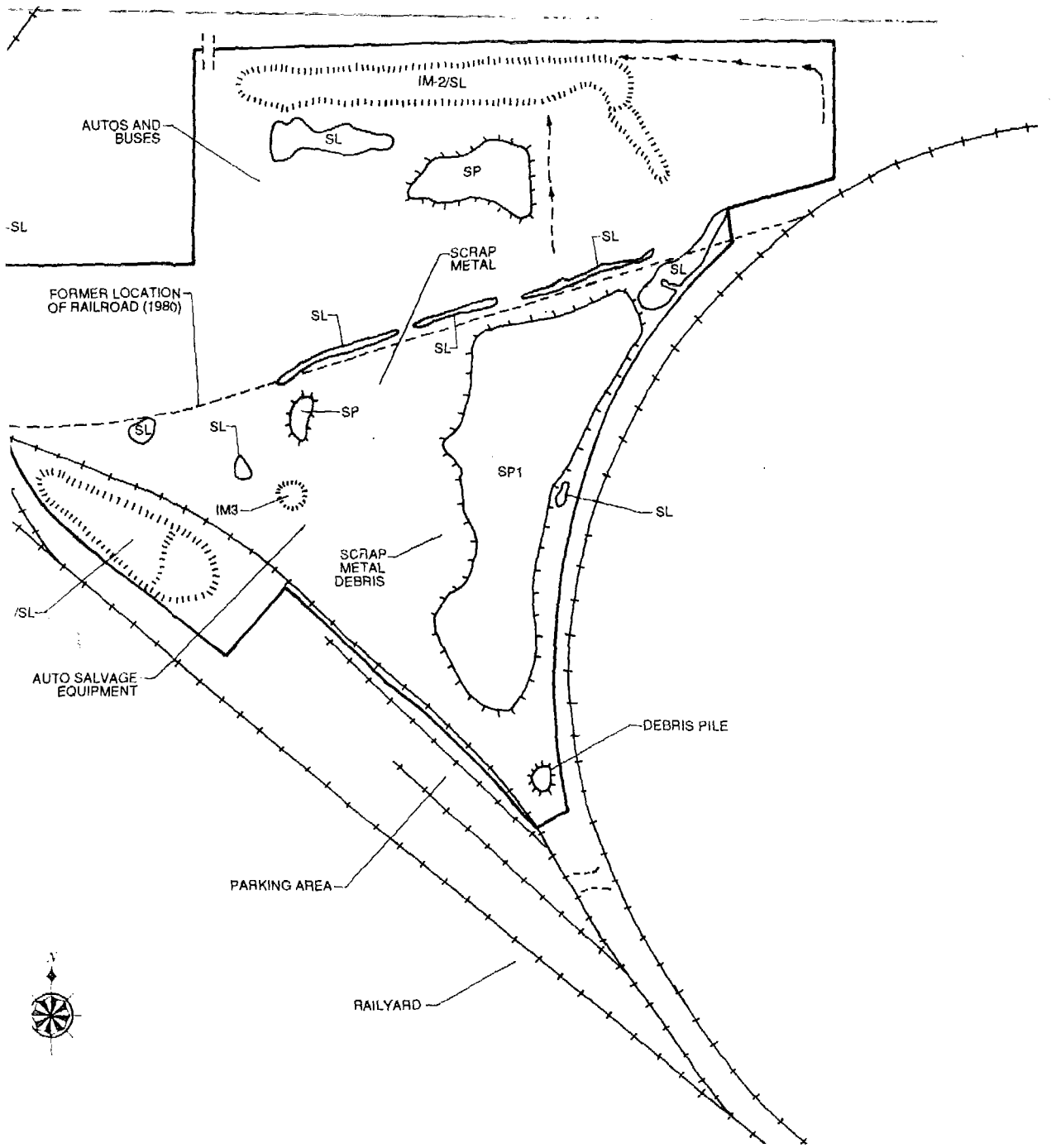
TRANSPORTATION UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

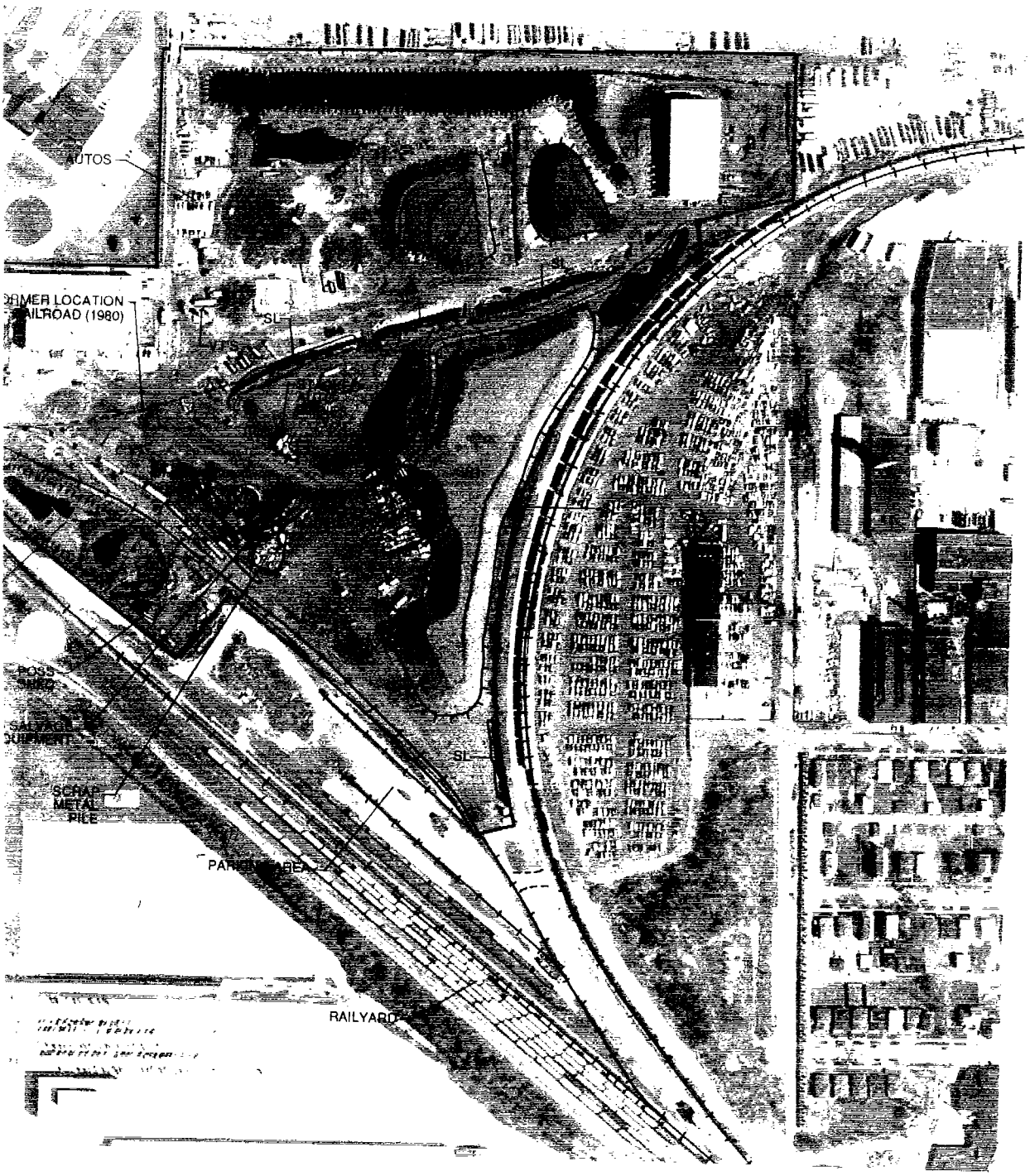
- BERM/DIKE
- STANDING LIQUID
- SL STANDING LIQUID
- EXCAVATION, PIT (EXTENSIVE)
- MOUNDED MATERIAL (EXTENSIVE)
- MOUNDED MATERIAL (SMALL)
- CRATER, SCAR
- DRUMS
- HORIZONTAL TANK
- PRESSURE TANK
- VERTICAL TANK
- CLEARED AREA
- DISTURBED GROUND
- FILL
- IMPOUNDMENT
- LAGOON
- OUTFALL
- SUMP
- STAIN
- SOLID WASTE
- TRENCH
- VEGETATION STRESS
- WASTE DISPOSAL AREA
- WETLAND VEGETATION

Midwest Metallics site, May 1, 1990. Approximate scale 1:2,400.


IM-2/SL
AUTOS AND BUSES
SL
SP
SL
SCRAP METAL
SL
SL
FORMER LOCATION OF RAILROAD (1980)
SL
SL
SP
SL
SL
SP1
IM3
SL
SCRAP METAL DEBRIS
/SL
AUTO SALVAGE EQUIPMENT
DEBRIS PILE
PARKING AREA
RAILYARD

APRIL 20, 1994 (FIGURE 9)

The site continues to be in operation. Liquid-filled impoundment IM-2/SL now contains one cell. No changes are noted in liquid-filled impoundment IM-1/SL and the impoundment annotated IM-3 in 1992 now contains liquid and is annotated as IM-3/SL. Storage pile SP1 has changed in configuration since 1992.



INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

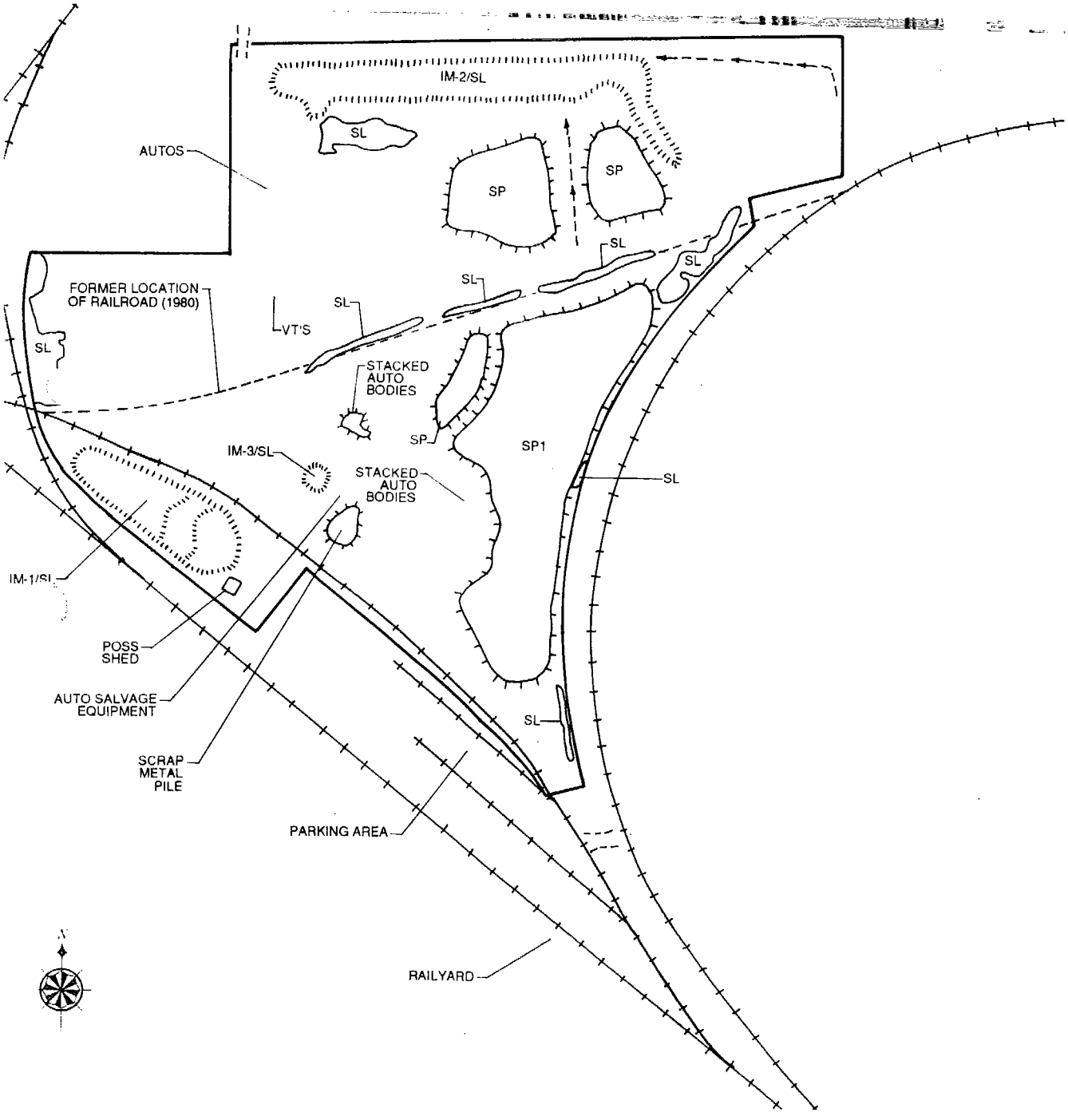
TRANSPORTATION/UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

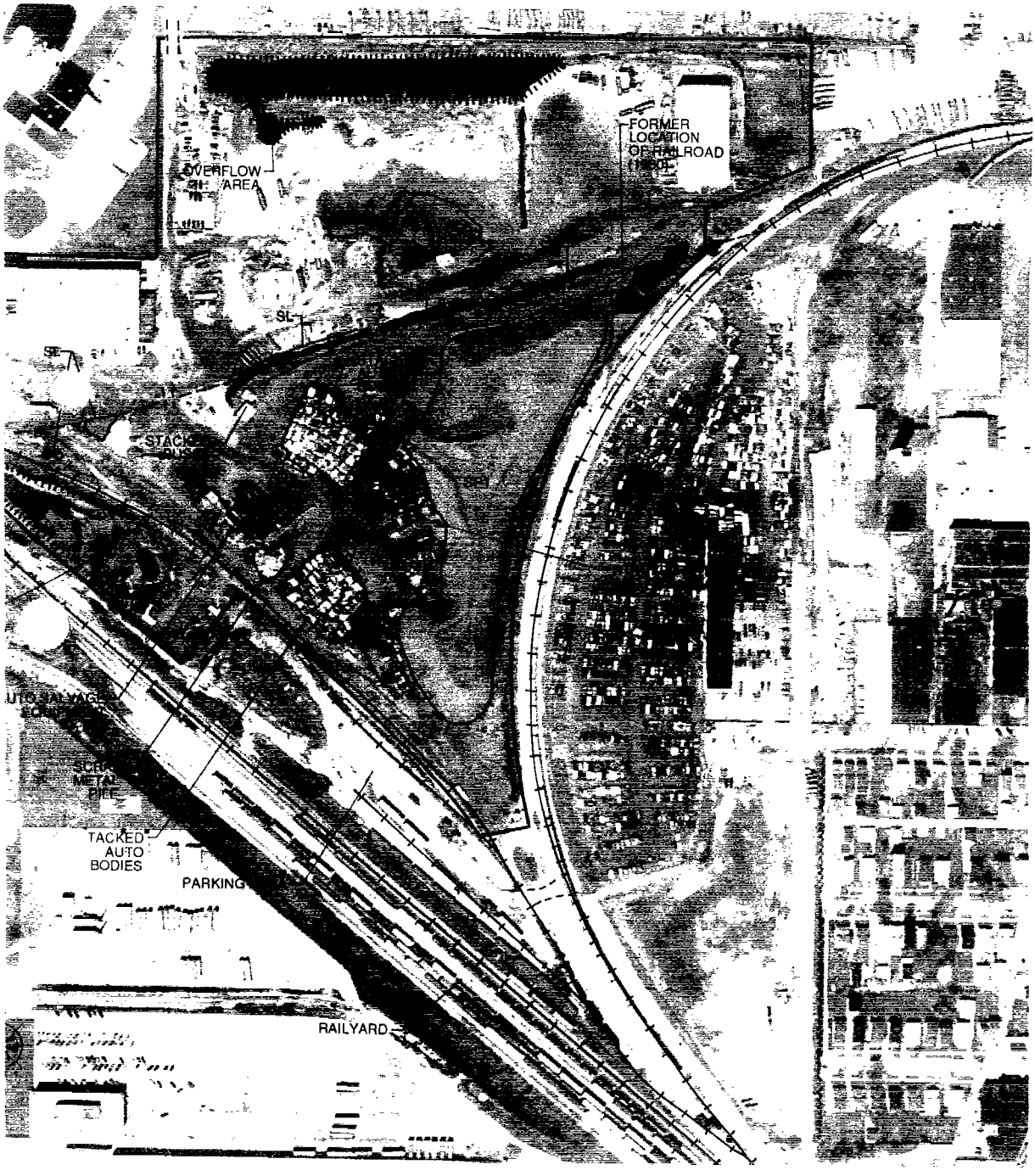
- BERM/DIKE
- STANDING LIQUID
- SL STANDING LIQUID
- EXCAVATION PIT (EXTENSIVE)
- MOUNDED MATERIAL (EXTENSIVE)
- MM MOUNDED MATERIAL (SMALL)
- CR CRATES BOXES
- DR DRUMS
- HT HORIZONTAL TANK
- PT PRESSURE TANK
- V VERTICAL TANK
- CA CLEARED AREA
- DG DISTURBED GROUND
- FL FILL
- IM IMPOUNDMENT
- LG LAGOON
- OF OUTFALL
- SD SLUDGE
- ST STAIN
- SW SOLID WASTE
- TR TRENCH
- VE VEGETATION STRESS
- WD WASTE DISPOSAL AREA
- WV WETLAND VEGETATION

Midwest Metallics site, April 20, 1994. Approximate scale 1:3,100.


IM-2/SL
SL
AUTOS
SP
SP
SL
SL
SL
FORMER LOCATION OF RAILROAD (1980)
SL
VT'S
SL
STACKED AUTO BODIES
SP
SP1
IM-3/SL
STACKED AUTO BODIES
SL
IM-1/SL
POSS SHED
AUTO SALVAGE EQUIPMENT
SL
SCRAP METAL PILE
PARKING AREA
RAILYARD
N

APRIL 2, 1997 (FIGURE 10)

The site continues to be in operation. Liquid-filled impoundment IM-2/SL has overflowed its berm and now extends to the area of standing liquid observed south of it in 1994. Another drainage segment which trends in a northerly direction toward the drainage segment previously observed, is visible at the northeast corner of the site. Liquid-filled impoundment IM-1/SL now contains three cells and the liquid-filled impoundment annotated IM-3/SL in 1994 is now dry and annotated IM-3. Storage pile SP1 has changed in configuration since 1994.



INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

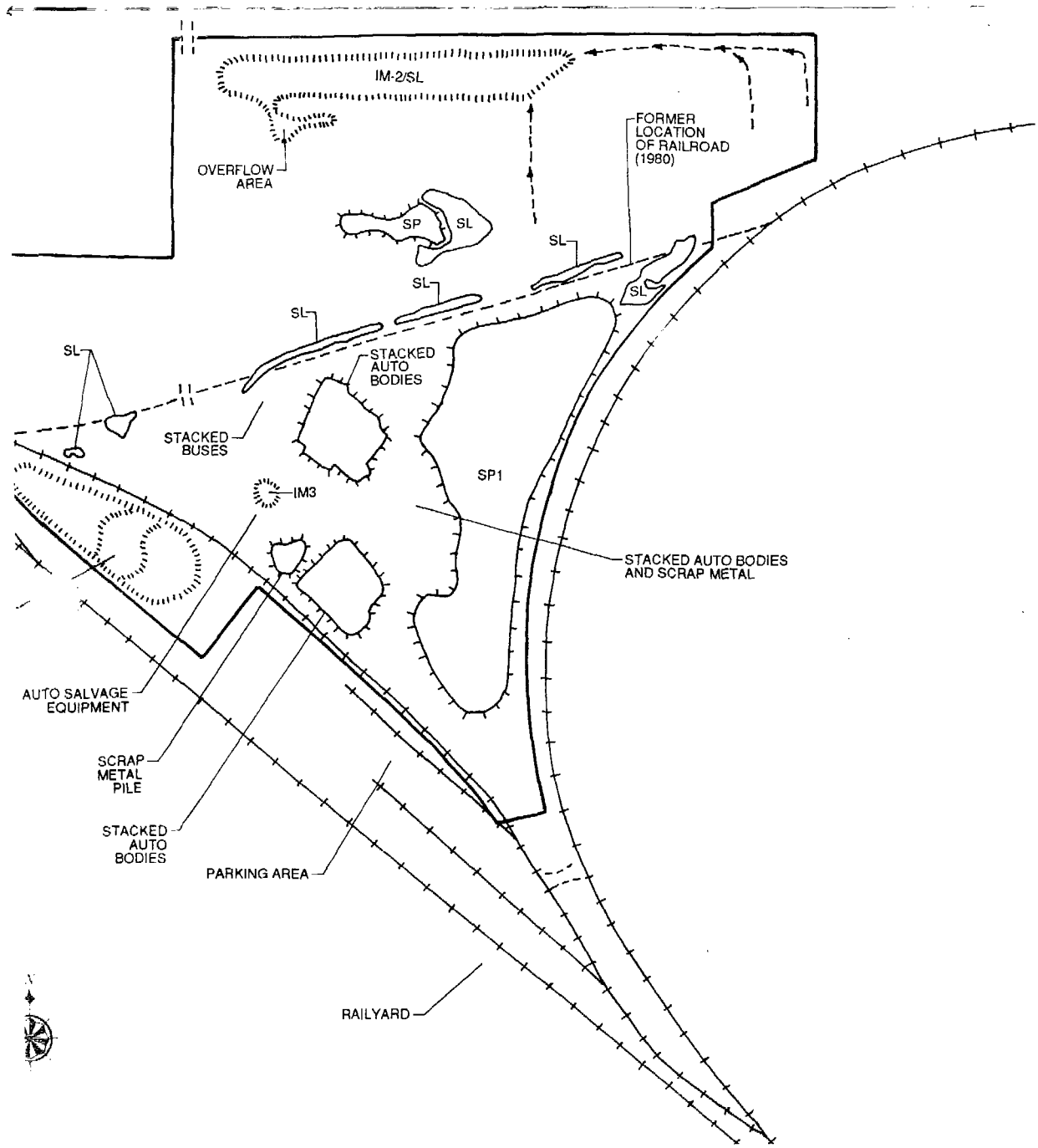
TRANSPORTATION UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

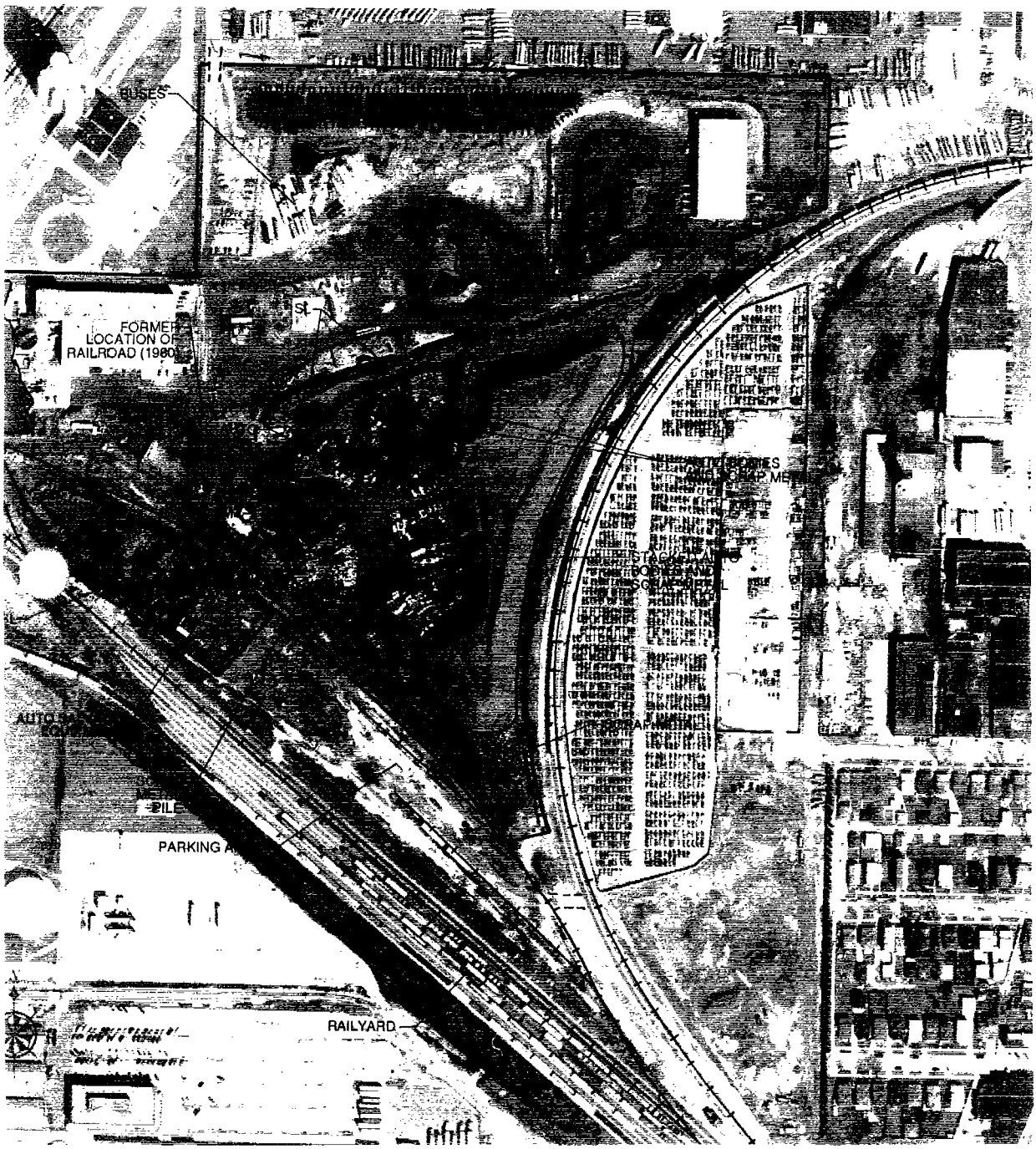
- BERM/DIKE
- STANDING LIQUID
- SL STANDING LIQUID
- EXCAVATION, PIT (EXTENSIVE)
- MOUNDED MATERIAL (EXTENSIVE)
- MM MOUNDED MATERIAL (SMALL)
- CP CRATES/BOXES
- DR DRUMS
- HT HORIZONTAL TANK
- PT PRESSURE TANK
- VT VERTICAL TANK
- CA CLEARED AREA
- DG DISTURBED GROUND
- FL FILL
- IM IMPOUNDMENT
- LG LAGOON
- OF OUTFALL
- SD SLUDGE
- ST STAIN
- SW SOLID WASTE
- TR TRENCH
- VS VEGETATION STRESS
- WD WASTE DISPOSAL AREA
- WV WETLAND VEGETATION

Midwest Metallics site, April 2, 1997. Approximate scale 1:2,10..


IM-2/SL
OVERFLOW AREA
FORMER LOCATION OF RAILROAD (1980)
SP
SL
SL
SL
SL
SL
SL
STACKED AUTO BODIES
STACKED BUSES
IM3
SP1
STACKED AUTO BODIES AND SCRAP METAL
AUTO SALVAGE EQUIPMENT
SCRAP METAL PILE
STACKED AUTO BODIES
PARKING AREA
RAILYARD

MARCH 24, 1998 (FIGURE 11)

The site continues to be in operation. Liquid-filled impoundment IM-2/SL has dried up slightly, leaving behind an area of standing liquid to the south of it. No changes are noted in liquid-filled impoundment IM-1/SL or the dry impoundment IM-3. No changes are visible in storage pile SP1.



INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

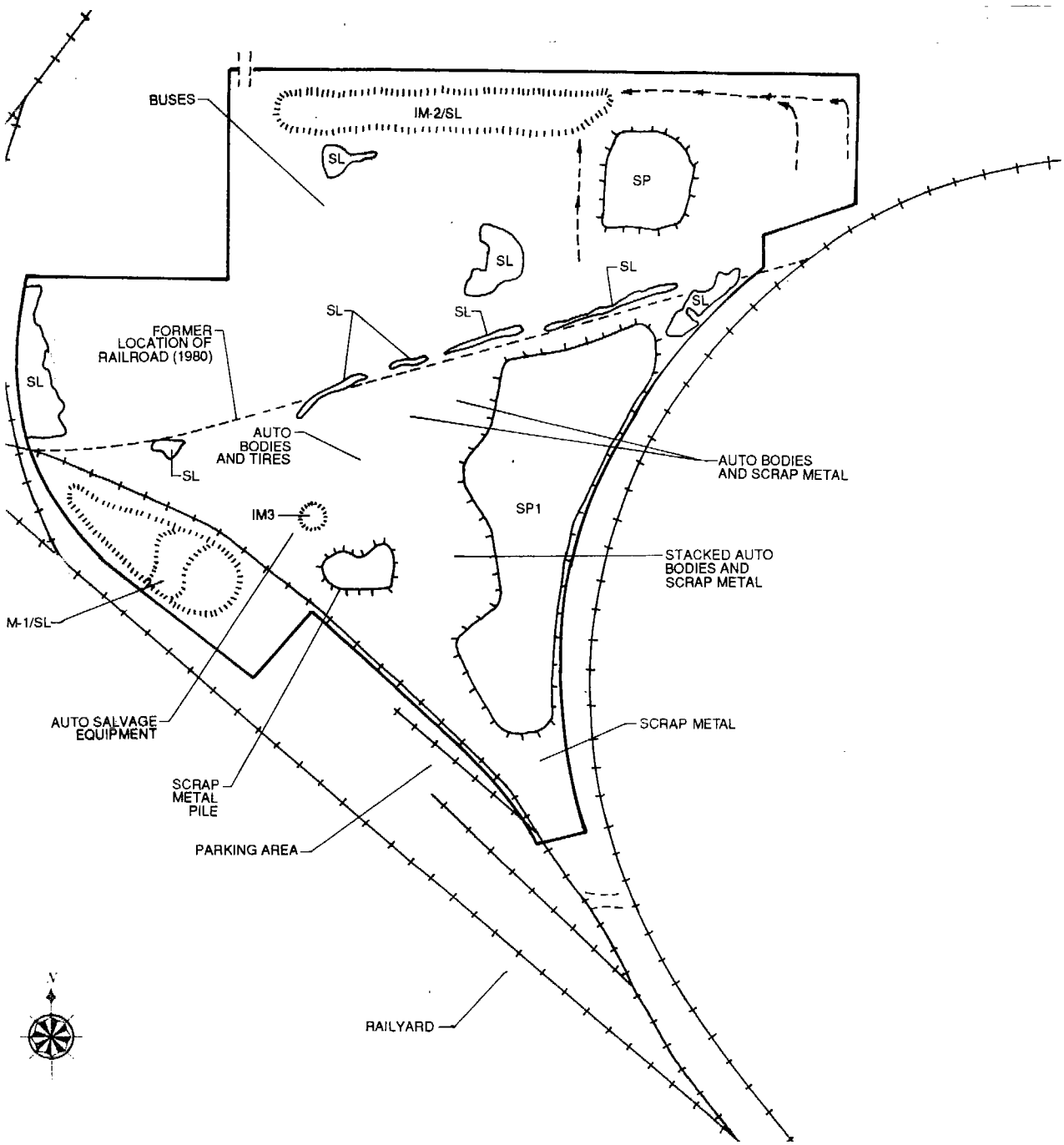
TRANSPORTATION UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

- BERM/DIKE
- STANDING LIQUID
- SL STANDING LIQUID
- EXCAVATION, PIT (EXTENSIVE)
- MOUNDED MATERIAL (EXTENSIVE)
- MOUNDED MATERIAL (SMALL)
- CRATES BOXES
- DRUMS
- HORIZONTAL TANK
- PRESSURE TANK
- VERTICAL TANK
- CLEARED AREA
- DISTURBED GROUND
- FILL
- IMPOUNDMENT
- LAGOON
- OUTFALL
- SLUDGE
- STAIN
- SOLID WASTE
- TRENCH
- VEGETATION/STRESS
- WASTE DISPOSAL AREA
- WETLAND VEGETATION

. Midwest Metallics site, March 24, 1988. Approximate scale 1:3,600.


BUSES
IM-2/SL
SL
SP
SL
SL
SL
SL
SL
FORMER LOCATION OF RAILROAD (1980)
SL
AUTO BODIES AND TIRES
SL
AUTO BODIES AND SCRAP METAL
IM3
SP1
STACKED AUTO BODIES AND SCRAP METAL
M-1/SL
AUTO SALVAGE EQUIPMENT
SCRAP METAL
SCRAP METAL PILE
PARKING AREA
RAILYARD
N

GLOSSARY

Access Road - A paved or unpaved route of vehicular access.

Debris - The remains of anything that can be identified as being broken down, destroyed, demolished, or dismantled.

Impoundment (IM) - A liquid containment area that appears to be related to activity on a site but does not appear to be used for waste storage, disposal and/or treatment.

Standing Liquid (SL) - A small, shallow, temporary collection of liquid, not necessarily waste. Not to include liquid contained in impoundments, trenches, pits, etc.

Tanks - Vertical tanks (VT), horizontal tanks (HT), pressure tanks (PT), tank farms, and solid waste management units. A large receptacle, container, or structure for holding liquid or gas.

REFERENCES

MAPS

Source[a]	Figure	Name	Scale	Date
USGS	1	United States	1:2,500,000	1972
USGS	2	Berwyn, IL	1:24,000	1993

COLLATERAL INFORMATION

OSHA Home Page. http://www.osha.gov/media/oshnews/june95/osha95205.html (accessed Nov 1998).

EPA. 1998. Collateral Information provided by Region 5.

LESAT (Lockheed Environmental Systems & Technologies Co.). 1998. Master Quality Assurance Project Plan. Prepared for EPA Environmental Sciences Division. Contract 68-C5-0065. Las Vegas, Nevada.

AERIAL PHOTOGRAPHS

Photo source[a]	Figure	Date of acquisition	Original scale	Film type[b]	Mission I.D.	Source frame #
SIDWELL	3	04-07-76	1:24,000	B&W	-	1508
SIDWELL	4	11-22-80	1:24,000	B&W	38B	67
SIDWELL	5	04-26-87	1:24,000	B&W	-	243
CAPS	6	04-07-88	1:24,000	B&W	38B	44
CAPS	7	03-20-90	1:24,000	B&W	38B	58
CAPS	8	05-01-92	1:24,000	B&W	38B	60
SIDWELL	9	04-20-94	1:24,000	B&W	-	090
SIDWELL	10	04-02-97	1:24,000	B&W	-	097
CAPS	11	03-24-98	1:24,000	B&W	38B	060

[a] CAPS Chicago Aerial Photo Services, Rosemont, Illinois
SIDWELL Sidwell Corporation, South Chicago, Illinois
USGS U.S. Department of Interior, U.S. Geological Survey, Washington, D.C.

[b] B&W Black-and-white

e 11. Midwest Metallics site, March 24, 1998. Approximate scale 1:3,400.